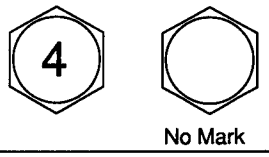
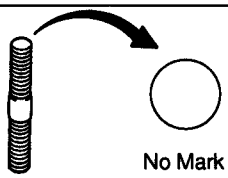
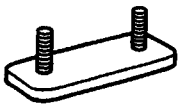
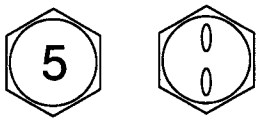
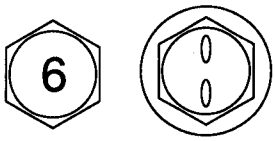
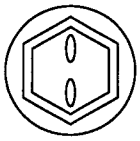
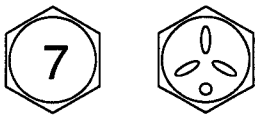
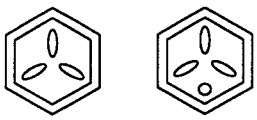
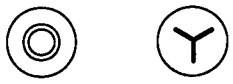
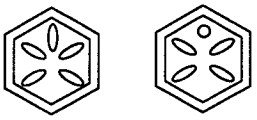
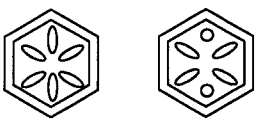
SERVICE SPECIFICATIONS

STANDARD BOLT

HOW TO DETERMINE BOLT STRENGTH

SS0ZS-01

Bolt Type				Class
Hexagon Head Bolt		Stud Bolt	Weld Bolt	
Normal Recess Bolt	Deep Recess Bolt			
 No Mark	 No Mark	 No Mark		4T
				5T
 w/ Washer	 w/ Washer			6T
				7T
				8T
				9T
				10T
				11T

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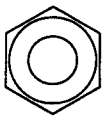
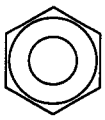
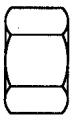
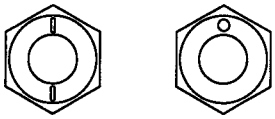
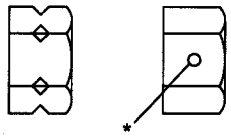
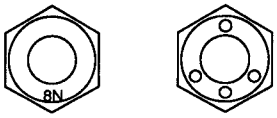
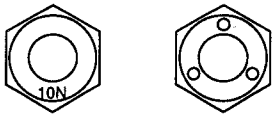
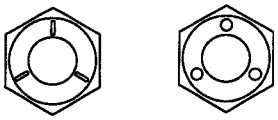
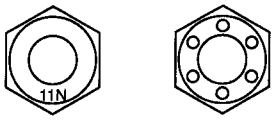
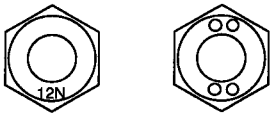
SS0ZT–01

SPECIFIED TORQUE FOR STANDARD BOLTS

Class	Diameter mm	Pitch mm	Specified torque					
			Hexagon head bolt			Hexagon flange bolt		
			N·m	kgf·cm	ft·lbf	N·m	kgf·cm	ft·lbf
4T	6	1	5	55	48 in.·lbf	6	60	52 in.·lbf
	8	1.25	12.5	130	9	14	145	10
	10	1.25	26	260	19	29	290	21
	12	1.25	47	480	35	53	540	39
	14	1.5	74	760	55	84	850	61
	16	1.5	115	1,150	83	–	–	–
5T	6	1	6.5	65	56 in.·lbf	7.5	75	65 in.·lbf
	8	1.25	15.5	160	12	17.5	175	13
	10	1.25	32	330	24	36	360	26
	12	1.25	59	600	43	65	670	48
	14	1.5	91	930	67	100	1,050	76
	16	1.5	140	1,400	101	–	–	–
6T	6	1	8	80	69 in.·lbf	9	90	78 in.·lbf
	8	1.25	19	195	14	21	210	15
	10	1.25	39	400	29	44	440	32
	12	1.25	71	730	53	80	810	59
	14	1.5	110	1,100	80	125	1,250	90
	16	1.5	170	1,750	127	–	–	–
7T	6	1	10.5	110	8	12	120	9
	8	1.25	25	260	19	28	290	21
	10	1.25	52	530	38	58	590	43
	12	1.25	95	970	70	105	1,050	76
	14	1.5	145	1,500	108	165	1,700	123
	16	1.5	230	2,300	166	–	–	–
8T	8	1.25	29	300	22	33	330	24
	10	1.25	61	620	45	68	690	50
	12	1.25	110	1,100	80	120	1,250	90
9T	8	1.25	34	340	25	37	380	27
	10	1.25	70	710	51	78	790	57
	12	1.25	125	1,300	94	140	1,450	105
10T	8	1.25	38	390	28	42	430	31
	10	1.25	78	800	58	88	890	64
	12	1.25	140	1,450	105	155	1,600	116
11T	8	1.25	42	430	31	47	480	35
	10	1.25	87	890	64	97	990	72
	12	1.25	155	1,600	116	175	1,800	130

SS0ZU–01

HOW TO DETERMINE NUT STRENGTH

Nut Type			Class
Present Standard Hexagon Nut	Old Standard Hexagon Nut		
	Cold Forging Nut	Cutting Processed Nut	
 No Mark			4N
 No Mark (w/ Washer)	 No Mark (w/ Washer)	 No Mark	5N (4T)
 6N			6N
		 *	7N (5T)
 8N			8N
 10N		 No Mark	10N (7T)
 11N			11N
 12N			12N

*: Nut with 1 or more marks on one side surface of the nut.

B06432

HINT:

Use the nut with the same number of the nut strength classification or the greater than the bolt strength classification number when tightening parts with a bolt and nut.

Example: Bolt = 4T

Nut = 4N or more

SS

CLUTCH

SS09Q–03

SERVICE DATA

Pedal height from dash panel	RHD LHD	139.3 – 149.3 mm (5.484 – 5.878 in.) 134.3 – 144.3 mm (5.287 – 5.681 in.)
Pedal free play		5.0 – 15.0 mm (0.197 – 0.591 in.)
Push rod play at pedal top		1.0 – 5.0 mm (0.039 – 0.197 in.)
Clutch release point from pedal full stroke end position		25 mm (0.98 in.) or more
Slotted spring pin protrusion		1.5 – 3.5 mm (0.059 – 0.138 in.)
Disc rivet head depth	Min.	0.3 mm (0.012 in.)
Disc runout	Max.	0.8 mm (0.031 in.)
Flywheel runout	Max.	0.1 mm (0.004 in.)
Diaphragm spring finger wear	Max. depth	0.5 mm (0.020 in.)
Diaphragm spring finger wear	Max. width	6.0 mm (0.236 in.)
Diaphragm spring tip non–alignment	Max.	0.5 mm (0.020 in.)

SS09R–03

TORQUE SPECIFICATION

Part tightened		N·m	kgf·cm	ft·lbf
Master cylinder installation nut		12	120	9
Clutch line		15	155	11
Release cylinder installation bolt		12	120	9
Union bolt		24.5	250	18
Bleeder plug		8.4	85	74 in.·lbf
Flywheel set bolt	1st	49	500	36
	2nd	Turn 90°		
Release fork support		37	375	27
Clutch cover x Flywheel		19	195	14

MANUAL TRANSAXLE

SERVICE DATA

SS0KT-03

SS

Input shaft roller bearing journal diameter	Min.	24.967 mm (0.9830 in.)
Input shaft 3rd gear journal diameter	Min.	30.985 mm (1.2199 in.)
Input shaft 4th gear journal diameter	Min.	28.985 mm (1.1411 in.)
Input shaft 5th gear journal diameter	Min.	24.885 mm (0.9797 in.)
Input shaft runout	Max.	0.03 mm (0.0012 in.)
Output shaft roller bearing journal diameter	Min.	32.985 mm (1.2986 in.)
Output shaft 1st gear journal diameter	Min.	37.985 mm (1.4955 in.)
Output shaft 2nd gear journal diameter	Min.	31.985 mm (1.2592 in.)
Output shaft runout	Max.	0.03 mm (0.0012 in.)
Gear thrust clearance 1st	STD Max.	0.10 – 0.40 mm (0.0039 – 0.0157 in.) 0.40 mm (0.0157 in.)
Gear thrust clearance 2nd	STD Max.	0.10 – 0.55 mm (0.0039 – 0.0217 in.) 0.55 mm (0.0217 in.)
Gear thrust clearance 3rd	STD Max.	0.10 – 0.35 mm (0.0039 – 0.0138 in.) 0.35 mm (0.0138 in.)
Gear thrust clearance 4th	STD Max.	0.10 – 0.55 mm (0.0039 – 0.0217 in.) 0.55 mm (0.0217 in.)
Gear thrust clearance 5th	STD Max.	0.10 – 0.57 mm (0.0039 – 0.0224 in.) 0.57 mm (0.0224 in.)
1st, 2nd, 3rd, 4th and 5th gear radial clearance (KOYO made)	STD Max.	0.015 – 0.058 mm (0.0006 – 0.0023 in.) 0.058 mm (0.0023 in.)
1st, 2nd, 3rd, 4th and 5th gear radial clearance (NSK made)	STD Max.	0.015 – 0.056 mm (0.0006 – 0.0022 in.) 0.056 mm (0.0022 in.)
No. 3 shift fork to No. 3 hub sleeve clearance	Max.	0.5 mm (0.020 in.)
No. 2 shift fork to No. 2 hub sleeve clearance	Max.	0.35 mm (0.014 in.)
No. 1 shift fork to reverse gear clearance	Max.	0.35 mm (0.014 in.)
Synchronizer ring to gear clearance	Min.	0.75 mm (0.0295 in.)
Drive in depth Input shaft front oil seal Control shaft cover oil seal Select inner lever slotted spring pin No. 1 shift inner lever slotted spring pin No. 2 shift inner lever slotted spring pin Transmission case oil seal Transaxle case oil seal		 15.8 ± 0.2 mm (0.622 ± 0.008 in.) 1.0 – 2.0 mm (0.039 – 0.079 in.) 0 ± 0.5 mm (0 ± 0.020 in.) 0 ± 0.5 mm (0 ± 0.020 in.) 0 ± 0.5 mm (0 ± 0.020 in.) 2.4 ± 0.3 mm (0.094 ± 0.012 in.) 1.9 ± 0.3 mm (0.075 ± 0.012 in.)
Differential side gear backlash		0.05 – 0.20 mm (0.0020 – 0.0079 in.)
Differential side gear thrust washer thickness		1.50 mm (0.0591 in.) 1.55 mm (0.0610 in.) 1.60 mm (0.0630 in.) 1.65 mm (0.0650 in.) 1.70 mm (0.0669 in.) 1.75 mm (0.0689 in.)
Differential side bearing preload (at starting) (For use with SST) New bearing Reused bearing		 0.8 – 1.6 N·m (8 – 16 kgf·cm, 6.9 – 13.9 in.·lbf) 0.5 – 1.0 N·m (5 – 10 kgf·cm, 4.3 – 8.7 in.·lbf)

Input shaft snap ring thickness		
No. 2 clutch hub	Mark 0	2.30 mm (0.0906 in.)
	Mark 1	2.36 mm (0.0929 in.)
	Mark 2	2.42 mm (0.0953 in.)
	Mark 3	2.48 mm (0.0976 in.)
	Mark 4	2.54 mm (0.1000 in.)
	Mark 5	2.60 mm (0.1024 in.)
No. 3 clutch hub	Mark A	2.25 mm (0.0886 in.)
	Mark B	2.31 mm (0.0909 in.)
	Mark C	2.37 mm (0.0933 in.)
	Mark D	2.43 mm (0.0957 in.)
	Mark E	2.49 mm (0.0980 in.)
	Mark F	2.55 mm (0.1004 in.)
	Mark G	2.61 mm (0.1028 in.)
Input shaft rear bearing	Mark A	2.29 mm (0.0902 in.)
	Mark B	2.35 mm (0.0925 in.)
	Mark C	2.41 mm (0.0949 in.)
	Mark D	2.47 mm (0.0972 in.)
	Mark E	2.53 mm (0.0996 in.)
	Mark F	2.59 mm (0.1020 in.)
Output shaft snap ring thickness		
No. 1 clutch hub	Mark A	2.50 mm (0.0984 in.)
	Mark B	2.56 mm (0.1008 in.)
	Mark C	2.62 mm (0.1031 in.)
	Mark D	2.68 mm (0.1055 in.)
	Mark E	2.74 mm (0.1079 in.)
	Mark F	2.80 mm (0.1102 in.)
Differential side bearing adjusting shim thickness		
	Mark AA	2.10 mm (0.0827 in.)
	Mark BB	2.15 mm (0.0846 in.)
	Mark CC	2.20 mm (0.0866 in.)
	Mark DD	2.25 mm (0.0886 in.)
	Mark EE	2.30 mm (0.0906 in.)
	Mark FF	2.35 mm (0.0925 in.)
	Mark GG	2.40 mm (0.0945 in.)
	Mark HH	2.45 mm (0.0965 in.)
	Mark JJ	2.50 mm (0.0984 in.)
	Mark KK	2.55 mm (0.1004 in.)
	Mark LL	2.60 mm (0.1024 in.)
	Mark MM	2.65 mm (0.1043 in.)
	Mark NN	2.70 mm (0.1063 in.)
	Mark PP	2.75 mm (0.1083 in.)
	Mark QQ	2.80 mm (0.1102 in.)
	Mark RR	2.85 mm (0.1122 in.)
	Mark SS	2.90 mm (0.1142 in.)
	Mark TT	2.95 mm (0.1161 in.)
	Mark UU	3.00 mm (0.1181 in.)

SS0KU–03

TORQUE SPECIFICATION

Part tightened	N·m	kgf·cm	ft·lbf
No. 2 cylinder head cover	7.0	71	62 in.·lbf
Clutch line bracket set bolt	4.9	50	43 in.·lbf
Clutch release cylinder x Transaxle	12	120	9
Transaxle x Engine	33	340	25
Starter x Transaxle	39	400	29
No. 1 engine hanger	40	400	29
RH and LH front suspension member reinforcement	47	480	35
Engine left mounting bracket x Engine left mounting insulator	49	490	35
Engine rear mounting insulator x Engine rear mounting bracket	64	650	47
Engine rear mounting bracket x Transaxle	49	500	36
Shift lever assembly x Body	12	120	9
Shift and select control cable x Body	4.9	50	43 in.·lbf
Clutch release fork support	37	375	27
Filler and drain plugs	39	400	29
Speed sensor	11	115	8
Back–up light switch	40	410	30
Control lever housing support bracket x Transaxle case	11	115	8
Selecting bellcrank assembly x Transmission case	25	250	18
Transmission case x Transmission case cover	18	185	13
Shift and select lever shaft assembly lock bolt	29	300	22
Shift and select lever assembly	20	200	14
Output shaft lock nut	118	1,200	87
Shift fork and shift head x Shift fork shaft	16	160	12
Rear bearing retainer	27	280	20
Reverse idler gear shaft lock bolt	29	300	22
Straight screw plug (Shift fork shaft)	25	250	18
Lock ball assembly	39	400	29
Transmission case x Transaxle case	29	300	22
Oil receiver pipe x Transmission case	17	175	13
Reverse shift arm bracket	17	175	13
Output shaft front bearing lock plate set bolt	11	115	8
Transaxle case receiver x Transaxle case	11	115	8
Straight screw plug (Reverse restrict pin)	13	130	9
Ring gear x Differential case	124	1,260	91

AUTOMATIC TRANSAXLE

SERVICE DATA

SS13Y-03

Line pressure (Wheel locked)		
	Engine idling	
	D range	372 – 407 kPa (3.8 – 4.2 kgf/cm^2, 54 – 60 psi)
	R range	588 – 683 kPa (6.0 – 7.0 kgf/cm^2, 85 – 100 psi)
	at stall (Throttle valve fully opened)	
	D range	1,067 – 1,187 kPa (10.9 – 12.1 kgf/cm^2, 155 – 172 psi)
	R range	1,420 – 1,675 kPa (14.5 – 17.1 kgf/cm^2, 206 – 243 psi)
Engine stall revolution	D and R ranges	2,280 ± 200 rpm
Time lag	N → D range	Less than 1.2 seconds
	N → R range	Less than 1.5 seconds
Engine idle speed (A/C OFF)	N range	700 ± 50 rpm
Drive plate runout	Max.	0.20 mm (0.0079 in.)
Torque converter runout	Max.	0.30 mm (0.0118 in.)
Torque converter installation distance		More than 9.3 mm (0.366 in.)
Differential oil seal drive in depth	RH	3.1 ± 0.5 mm (0.122 ± 0.020 in.)
	LH	4.3 ± 0.5 mm (0.169 ± 0.020 in.)
Shift schedule (w/ Kick down switch)		
D range		
(Throttle valve fully opened)	1 → 2	46 – 51 km/h (29 – 32 mph)
	2 → 3	88 – 96 km/h (55 – 60 mph)
	3 → O/D	142 – 151 km/h (88 – 94 mph)
	O/D → 3 (Kick down switch OFF)	117 – 125 km/h (73 – 78 mph)
	O/D → 3 (Kick down switch ON)	137 – 146 km/h (85 – 91 mph)
	3 → 2 (Kick down switch OFF)	66 – 71 km/h (41 – 44 mph)
	3 → 2 (Kick down switch ON)	82 – 90 km/h (51 – 56 mph)
	2 → 1 (Kick down switch OFF)	10 – 14 km/h (6 – 9 mph)
	2 → 1 (Kick down switch ON)	40 – 44 km/h (25 – 27mph)
(Throttle valve fully closed)	3 → O/D	32 – 36 km/h (20 – 22 mph)
	O/D → 3	27 – 31 km/h (17 – 19 mph)
2 range		
(Throttle valve fully opened)	1 → 2	46 – 51 km/h (29 – 32 mph)
	3 → 2	85 – 93 km/h (53 – 58 mph)
	2 → 1 (Kick down switch OFF)	10 – 14 km/h (6 – 9 mph)
	2 → 1 (Kick down switch ON)	40 – 44 km/h (25 – 27mph)
L range		
(Throttle valve fully opened)	3 → 2	85 – 93 km/h (53 – 58 mph)
	2 → 1	44 – 48 km/h (25 – 30 mph)

Shift schedule (w/o Kick down switch)		
D range		
(Throttle valve fully opened)	1 → 2	46 – 51 km/h (29 – 32 mph)
	2 → 3	88 – 96 km/h (55 – 60 mph)
	3 → O/D	142 – 151 km/h (88 – 94 mph)
	O/D → 3	137 – 146 km/h (85 – 91 mph)
	3 → 2	82 – 90 km/h (51 – 56 mph)
	2 → 1	40 – 44 km/h (25 – 27mph)
(Throttle valve fully closed)	3 → O/D	32 – 36 km/h (20 – 22 mph)
	O/D → 3	27 – 31 km/h (17 – 19 mph)
2 range		
(Throttle valve fully opened)	1 → 2	46 – 51 km/h (29 – 32 mph)
	3 → 2	85 – 93 km/h (53 – 58 mph)
	2 → 1	40 – 44 km/h (25 – 27mph)
L range		
(Throttle valve fully opened)	3 → 2	85 – 93 km/h (53 – 58 mph)
	2 → 1	44 – 48 km/h (25 – 30 mph)
Lock–up point	Throttle valve opening 5 %	
3rd gear (O/D main switch OFF)	Lock–up ON	65 – 70 km/h (40 – 43 mph)
	Lock–up OFF	60 – 65 km/h (37 – 40 mph)
O/D gear	Lock–up ON	62 – 67 km/h (39 – 42 mph)
	Lock–up OFF	58 – 63 km/h (36 – 39 mph)

SS13Z-02

TORQUE SPECIFICATION

Part tightened		N·m	kgf·cm	ft·lbf
Vehicle speed sensor x Transaxle		11.3	115	8
Direct clutch speed sensor x Transaxle		5.4	55	48 in.·lbf
Transaxle control cable x Control shaft		12	120	9
Control shaft x Neutral start switch		12	120	9
Neutral start switch x Transaxle	Bolt	5.4	55	48 in.·lbf
	Nut	6.9	70	61 n.·lbf
Solenoid valve x Valve body		11	110	8
Valve body x Transaxle		11	110	8
ATF temperature sensor x Transaxle		11	110	8
Solenoid wire clamp x Transaxle		11	110	8
Oil strainer x Valve body		10	100	7
Oil pan x Transaxle		9.0	91	80 in.·lbf
Drain plug x Oil pan		17	175	13
Floor shift assembly x Body		12	120	9
Floor shift assembly x Transaxle control cable		12	120	9
Air cleaner bracket x Transaxle		19	195	14
Starter x Transaxle		39	400	29
Transaxle x Engine		29.5	300	22
Engine hanger x Engine		40	400	29
Steering wheel x column shaft		34	350	25
Tie rod end x Axle carrier		49	500	36
Torque converter x Drive plate		27	275	20
Lower suspension arm x Axle carrier		98	1,000	72
Drive shaft lock nut		216	2,200	159
LH engine mounting x Transaxle		49	500	36
Drive plate x Crank shaft		88	900	65
PS pipe clamp x front suspension member		7.8	80	69 in.·lbf
Front suspension member reinforcement x Front suspension member		47	480	35
Front suspension member reinforcement x Body		47	480	35
Rear engine mounting bracket x Front suspension member		80	810	59
Front suspension member x Body	Bolt A:	116	1,185	86
(MS: See page SR–36)	Bolt B:	70	715	52
(PS: See page SR–52)				
Wiper arm x Wiper link assembly		21	214	15
Wiper arm assembly x Body		5.5	55	49 in.·lbf
Outer front cowl top panel x Body		5.0	50	43 in.·lbf
No.3 instermediate shaft assembly x Steering gear assembly		47	480	35
PS only:				
Pressure feed and return tubes x Steering gear assembly	LHD:	37 (44)	375 (450)	27 (33)
	RHD:	32 (250)	325 (250)	24 (18)

( ): For use without SST

SUSPENSION AND AXLE

SS13W-03

SERVICE DATA

Cold tire inflation pressure Tire size: 175/65R14 82T	Vehicle load up to 4 passengers	Front, rear	220 kPa (2.2 kgf/cm^2, 32 psi)
	Vehicle load up to 5 passengers and full rated loads	Front, rear*1 Front, rear*2	220 kPa (2.2 kgf/cm^2, 32 psi) 240 kPa (2.4 kgf/cm^2, 35 psi)
Front wheel alignment	Vehicle height Rear drum brake	Front*3 Rear*4	187 mm (7.36 in.) 257 mm (10.12 in.)
	Rear disc brake	Front*3 Rear*4	187 mm (7.36 in.) 256 mm (10.08 in.)
	Camber	Right–left error	–0°35' ± 45' (–0.58° ± 0.75°) 45' (0.75°) or less
	Caster (Rear drum brake)	Manual steering Power steering Right–left error	0°55' ± 45' (0.92° ± 0.75°) 1°54' ± 45' (1.90° ± 0.75°) 45' (0.75°) or less
	Caster (Rear disc brake)	Manual steering Power steering Right–left error	0°57' ± 45' (0.95° ± 0.75°) 1°56' ± 45' (1.93° ± 0.75°) 45' (0.75°) or less
	Steering axis inclination	Right–left error	10°05' ± 45' (10.08° ± 0.75°) 45' (0.75°) or less
	Toe–in (total)	Rack end length difference	0° ± 12' (0° ± 0.2°, 0 ± 2 mm, 0 ± 0.08 in.) 1.5 mm (0.059 in.) or less
	Wheel angle Manual steering Power steering	Inside wheel Outside wheel: Reference Inside wheel Outside wheel: Reference	36°59' ± 2° (36.98° ± 2°) 32°09' (32.15°) 36°58' ± 2° (36.97° ± 2°) 32°19' (32.32°)
Rear wheel alignment	Camber	Right–left error	–0°57' ± 45' (–0.95° ± 0.75°) 45' (0.75°) or less
	Toe–in (total)		0°21' ± 15' (0.35° ± 0.25°) 3.3 ± 2.3 mm (0.13 ± 0.09 in.)
Front axle	Axle bearing backlash	Maximum	0.05 mm (0.0020 in.)
	Axle hub deviation	Maximum	0.05 mm (0.0020 in.)
Front drive shaft	Drive shaft standard length	LH RH	574.3 ± 5.0 mm (22.610 ± 0.197 in.) 813.3 ± 5.0 mm (32.020 ± 0.197 in.)
Front suspension	Lower suspension arm ball joint turning torque		0.59 – 3.43 N·m (6 – 35 kgf·cm, 5.2 – 30 in.·lbf)
Rear axle	Axle bearing backlash	Maximum	0.05 mm (0.0020 in.)
	Axle hub deviation	Maximum	0.07 mm (0.0028 in.)

*1: For driving under 160 km/h (100 mph)
*2: For driving at 160 km/h (100 mph) or over
*3: Front measuring point
Measure the distance from the ground to the head center of the front side lower suspension arm mounting bolt.
*4: Rear measuring point
Measure the distance from the ground to the center of the rear axle beam mounting bolt.

SS13X–03

TORQUE SPECIFICATION

Part tightened		N·m	kgf·cm	ft·lbf
FRONT AXLE				
Hub nut		103	1,050	76
Tie rod end lock nut		47	480	35
Steering knuckle x Shock absorber		132	1,350	97
Steering knuckle x Brake caliper		88	900	65
Steering knuckle x Tie rod end		49	500	36
Axle hub x Drive shaft		216	2,200	159
Lower suspension arm x Steering knuckle		98	1,000	72
Steering knuckle x Dust cover		8.3	85	74 in.·lbf
ABS speed sensor set bolt		8.0	82	71 in.·lbf
FRONT SUSPENSION				
Suspension support x Body		39	400	29
Suspension support x Piston rod		33	340	24
Flexible hose and ABS speed sensor wire harness clamp x Shock absorber		29	300	22
Lower suspension arm front side set bolt		88	900	65
Lower suspension arm rear side set bolt		132	1,350	97
Engine rear mount x Suspension member		80	810	59
Suspension member set bolt	Front side	70	715	52
	Rear side	116	1,185	86
Stabilizer bar bracket set bolt		19	190	14
Stabilizer bar link set nut		18	180	13
REAR AXLE				
Hub nut		103	1,050	76
Brake caliper set bolt		47	475	34
Axle hub set bolt		52	526	38
REAR SUSPENSION				
Shock absorber x Body		25	250	18
Shock absorber x Rear axle beam		49	500	36
Brake line x Flexible hose		15	155	11
Flexible hose bracket set bolt		29	300	22
LSPV bracket x Axle beam		9.0	92	80 in.·lbf
ABS speed sensor wire harness clamp set bolt		5.4	55	48 in.·lbf
Parking brake cable clamp set nut		5.4	55	48 in.·lbf
Axle beam x Body		82	837	60

BRAKE

SERVICE DATA

SS0M2-06

Brake pedal height (from dash panel)	LHD	124.3 – 134.3 mm (4.89 – 5.287 in.)
Brake pedal height (from dash panel)	RHD	129.3 – 139.3 mm (5.091 – 5.482 in.)
Brake pedal free play		1 – 3 mm (0.04 – 0.12 in.)
Brake pedal reserve distance at 490 N (50 kgf, 110.2 lbf)		More than 48 mm (1.89 in.)
Parking brake lever travel at 196 N (20 kgf, 44.1 lbf)		6 – 9 clicks
Front brake pad thickness	STD	11.0 mm (0.433 in.)
Front brake pad thickness	Minimum	1.0 mm (0.039 in.)
Front brake disc thickness	STD	20.0 mm (0.787 in.)
Front brake disc thickness	Minimum	18.0 mm (0.709 in.)
Front brake disc runout	Maximum	0.05 mm (0.0020 in.)
Rear brake drum inside diameter	STD	200.0 mm (7.874 in.)
Rear brake drum inside diameter	Maximum	201.0 mm (7.913 in.)
Rear brake shoe lining thickness	STD	4.0 mm (0.157 in.)
Rear brake shoe lining thickness	Minimum	1.0 mm (0.039 in.)
Rear brake drum to shoe clearance		0.6 mm (0.024 in.)
Rear brake pad thickness	STD	10.0 mm (0.394 in.)
Rear brake pad thickness	Minimum	1.0 mm (0.039 in.)
Rear brake disc thickness	STD	9.0 mm (0.354 in.)
Rear brake disc thickness	Minimum	8.0 mm (0.315 in.)
Rear brake disc runout	Maximum	0.15 mm (0.0059 in.)
Rear brake disc inside diameter	STD	173.0 mm (6.811 in.)
Rear brake disc inside diameter	Maximum	174.0 mm (6.850 in.)

SS0M3–07

TORQUE SPECIFICATION

Part tightened	N·m	kgf·cm	ft·lbf
Bleeder plug (Front brake caliper, rear brake wheel cylinder)	8.3	85	73 in.·lbf
Bleeder plug (Rear brkae caliper)	11	110	8
Parking brake equalizer lock nut	5.4	55	48 in.·lbf
Master cylinder x Brake booster	13	130	9
Brake line union nut	15	155	11
Brake booster clevis lock nut	26	260	19
Brake booster installation nut	13	130	9
Brake pedal assembly x Reinforcement	19.5	200	14
Brake pedal x Pedal Bracket	37	375	27
Front brake caliper installation bolt	34	350	25
Front brake torque plate x Steering knuckle	88	900	65
Front brake caliper x Flexible hose	30	310	22
Rear drum brake wheel cylinder x Backing plate	10	100	7
Flexible hose x Rear axle beam	30	310	22
Rear brake caliper x Flexible hose	30	310	22
Rear brake caliper installation bolt	47	475	34
Load sensing proportioning valve assembly x Body	19	195	14
Load sensing proportioning valve assembly x Rear axle beam	13	130	9
ABS actuator assembly x Body	19	195	14
ABS actuator assembly x Clamp	19	195	14
ABS actuator x Actuator No. 1 bracket	4.7	48	42 in.·lbf
Front speed sensor x Steering knuckle	8.0	82	71 in.·lbf
Front speed sensor wire harness clamp x Shock absorber	29	300	22
Front speed sensor wire harness clamp x Body	8.0	82	71 in.·lbf
Rear axle hub installation bolt	52	526	38

STEERING

SERVICE DATA

SS0MY–09

DRIVE BELT		
Drive belt deflection	New belt	8 – 10 mm (0.315 – 0.394 in.)
	Used belt	11 – 13 mm (0.433 – 0.512 in.)
*Drive belt tension	New belt	440 – 540 N (45 – 55 kgf)
	Used belt	240 – 340 N (25 – 35 kgf)
POWER STEERING FLUID		
Fluid level rise	Maximum	5 mm (0.20 in.)
Fluid pressure at idle speed with valve closed	Minimum	5,900 kPa (60 kgf/cm^2, 852 psi)
STEERING WHEEL		
Steering wheel freeplay	Maximum	30 mm (1.18 in.)
Steering effort at idle speed	Reference	
	Manual steering	28 N·m (285 kgf·cm, 21 ft·lbf)
	Power steering	6.5 N·m (65 kgf·cm, 58 in.·lbf)
POWER STEERING VANE PUMP		
Vane pump rotating torque		0.27 N·m (2.8 kgf·cm, 2.4 in.·lbf) or less
Vane pump shaft and front housing bushing oil clearance	STD	0.021 – 0.043 mm (0.0008 – 0.0017 in.)
	Maximum	0.07 mm (0.0028 in.)
Vane plate height	Minimum	7.6 mm (0.299 in.)
Vane plate thickness	Minimum	1.405 mm (0.0553 in.)
Vane plate length	Minimum	11.993 mm (0.4722 in.)
Vane plate and vane pump rotor groove clearance	Maximum	0.03 mm (0.0012 in.)
Vane plate length	Pump rotor and cam ring mark	
	0	12.001 – 12.003 mm (0.47248 – 0.47256 in.)
	1	11.999 – 12.001 mm (0.47240 – 0.47248 in.)
	2	11.997 – 11.999 mm (0.47232 – 0.47240 in.)
	3	11.995 – 11.997 mm (0.47224 – 0.47232 in.)
	4	11.993 – 11.995 mm (0.47216 – 0.47224 in.)
Spring free length	Minimum	35.8 mm (1.409 in.)
MANUAL STEERING GEAR		
Steering rack runout	Maximum	0.15 mm (0.0059 in.)
Total preload	Turning	0.6 – 1.5 N·m (6 – 15 kgf·cm, 5.2 – 13.0 in.·lbf)
POWER STEERING GEAR		
Steering rack runout	Maximum	0.1 mm (0.004 in.)
Total preload	Turning	
	LHD	1.2 – 1.4 N·m (12 – 14 kgf·cm, 10.4 – 12.2 in.·lbf)
	RHD	0.8 – 1.5 N·m (8 – 15 kgf·cm, 6.9 – 13.0 in.·lbf)

* For use with belt tension gauge

SS141-03

TORQUE SPECIFICATION

Part tightened		N·m	kgf·cm	ft·lbf
TILT STEERING COLUMN				
Adjusting nut		See page SR–18		
No. 2 tilt lever lock bolt		5.4	55	48 in.·lbf
No. 2 intermediate shaft assembly x Main shaft assembly		28	290	21
Column assembly set bolt		21	210	15
Sliding yoke x No. 3 intermediate shaft assembly		28	290	21
No. 2 intermediate shaft assembly x Sliding yoke		28	290	21
Steering wheel set nut		34	350	25
Steering wheel pad set screw (Torx screw)		8.8	90	78 in.·lbf
POWER STEERING VANE PUMP				
Rear housing x Front housing		22	220	16
Oil pressure sensor		21	210	15
Pressure port union		69	700	51
Front and rear bracket x Pump housing		44	440	32
Heat insulator and rear stay x Rear housing		44	440	32
Oil reservoir x Pump housing		9.0	90	78 in.·lbf
Pump assembly set bolt	Bolt A	44	440	32
	Bolt B	44	440	32
	Bolt C	44	440	32
Pressure feed tube x Pump assembly		41 (44)	415 (450)	30 (33)
MANUAL STEERING GEAR				
Engine hanger set bolt		20	204	15
Rack guide spring cap lock nut		36 (49)	365 (500)	26 (36)
Rack end x Rack		62 (83)	630 (850)	46 (61)
Tie rod end lock nut		47	480	35
Engine rear mount bracket set bolt		49	500	36
Engine rear mount bracket x Engine rear mount insulator		64	650	47
No. 3 intermediate shaft assembly x Steering pinion		28	290	21
Manual steering gear assembly set bolt		74	750	54
Steering gear heat insulator set bolt		7.4	75	65 in.·lbf
Front suspension member x Frame	Bolt A	116	1,185	86
	Bolt B	70	715	52
Engine rear mount insulator x Front suspension member		80	810	59
Front suspension member reinforcement set bolt		47	480	35
Lower suspension arm x Steering knuckle		98	1,000	72
Engine hood x Hinge		13	130	9
Tie rod end x Steering knuckle		49	500	36
POWER STEERING GEAR				
Engine hanger set bolt		20	204	15
Control valve housing x Rack housing	LHD	21	220	15
	RHD	18	185	13
Rack guide spring cap lock nut (LHD)		28 (39)	290 (400)	21 (29)
Rack end x Rack (LHD)		62 (83)	630 (850)	46 (61)
Rack end x Rack (RHD)		57 (76)	580 (780)	42 (56)

Part tightened		N·m	kgf·cm	ft·lbf
Tie rod end lock nut		47	480	35
Turn pressure tube x Rack housing	LHD	11 (13)	115 (130)	8 (9)
	RHD	22 (25)	225 (250)	16 (18)
Engine rear mount bracket set bolt		49	500	36
Engine rear mount bracket x Engine rear mount insulator		64	650	47
No. 3 intermediate shaft assembly x Control valve shaft		28	290	21
PS gear assembly set bolt		74	750	54
Rack housing heat insulator set bolt (RHD)		7.4	75	65 in.·lbf
Dynamic damper (with rack housing heat insulator) set bolt (LHD)		18	180	13
Rack housing heat insulator set bolt		35	360	26
Front suspension member x Frame	Bolt A	116	1,185	86
	Bolt B	70	715	52
Engine rear mount insulator x Front suspension member		80	810	59
Front suspension member reinforcement set bolt		47	480	35
Lower suspension arm x Steering knuckle		98	1,000	72
Engine hood x Hinge		13	130	9
Tube clamp		7.8	80	69 in.·lbf
Pressure feed and return tube	LHD	27 (25)	280 (250)	20 (18)
	RHD	41 (44)	415 (450)	30 (33)

( ): For use without SST

SUPPLEMENTAL RESTRAINT SYSTEM

TORQUE SPECIFICATION

SS16X-01

Part tightened		N·m	kgf·cm	ft·lbf
Steering wheel		34	350	25
Steering wheel pad		8.8	90	78 in.·lbf
Front passenger airbag assembly x Instrument panel		5.0	51	44 in.·lbf
Front passenger airbag assembly x Instrument panel reinforcement		20	205	15
Front seat installation bolt		37	375	27
Seatback assembly x Seat cushion assembly		43	440	32
Airbag sensor assembly		20	205	15
Side airbag sensor assembly		20	205	15
Front seat outer belt retractor	Upper bolt	4.7	48	42 in.·lbf
	Lower bolt	42	430	31
Front airbag sensor		20	205	15

BODY ELECTRICAL

SERVICE DATA

SS05U–05

DAYTIME RUNNING LIGHT RELAY (MAIN) (Wire Harness Side)	
1 – Ground (Ignition switch position LOCK or ACC)	No voltage
1 – Ground (Ignition switch position ON or START)	Battery positive voltage
8 – Ground (Engine Stop)	No voltage
8 – Ground (Engine Running)	Battery positive voltage
3 – Ground (Constant)	Battery positive voltage
5 – Ground (Constant)	Battery positive voltage
HEADLIGHT BEAM LEVEL CONTROL ECU (Wire Harness Side)	
2 – Ground (Light control switch TAIL OR HEAD)	Battery positive voltage
SPEEDOMETER (ON–VEHICLE)	
Standard indication (mph)	Allowable range (mph)
20	20 – 24.5
40	40 – 46.5
60	60 – 68.5
80	80 – 90.5
100	100 – 112.5
Standard indication (km/h)	Allowable range (km/h)
20	20 – 26
40	40 – 48
60	60 – 70
80	80 – 92
100	100 – 114
120	120 – 136
140	140 – 158
160	160 – 180
TACHOMETER (ON–VEHICLE)/ DC 13.5 V 25 °C at (77 °F)	
Standard indication	Allowable range
1,000	970 – 1,030
2,000	1,940 – 2,060
3,000	2,910 – 3,090
4,000	3,880 – 4,120
5,000	4,850 – 5,150
6,000	5,820 – 6,180
7,000	6,790 – 7,210
FUEL SENDER GAUGE	
Float position mm (in.)	Resistance (Ω)
F: Approx. 92.0 (3.62) ± 3.0 (0.12)	Approx. 4.0±0.5
1/2: Approx. 35.4 (1.00) ± 3.0 (0.12)	Approx. 55.0±1.5
E: Approx. 46.6 (1.84) ± 3.0 (0.12)	Approx. 107.0±2.5
ENGINE COOLANT TEMPERATURE SENDER GAUGE (Resistance)	
Temperature °C (°F)	Resistance (Ω)
50 (122.0)	160 – 240
120 (248.0)	17.1 ± 21.2

BODY

TORQUE SPECIFICATION

SS140-02

Part tightened	N·m	kgf·cm	ft·lbf
FRONT BUMPER	–	–	–
Reinforcement x Body	20	204	15
HOOD	–	–	–
Hood x Hood hinge	13	130	9
Hood lock x Body	8.0	82	71 in.·lbf
FRONT DOOR	–	–	–
Window regulator x Door panel	5.5	56	49 in.·lbf
Door lock x Door panel	5.5	56	49 in.·lbf
Outside handle x Door panel	5.5	56	49 in.·lbf
Door hinge x Door panel	43	440	32
Door hinge x Body	43	440	32
Door lock striker x Body	23	230	17
Door check x Door panel	5.5	56	49 in.·lbf
Door check x Body	30	310	22
Outer rear view mirror x Door panel	5.5	56	49 in.·lbf
REAR DOOR	–	–	–
Window regulator x Door panel	5.5	56	49 in.·lbf
Door lock x Door panel	5.5	56	49 in.·lbf
Outside handle x Door panel	5.5	56	49 in.·lbf
Door hinge x Door panel	26	265	19
Door hinge x Body	43	440	32
Door lock striker x Body	23	230	17
Door check x Door panel	5.5	56	49 in.·lbf
Rear door check x Body	30	310	22
BACK DOOR	–	–	–
Door hinge x Body	43	438	32
Door hinge x Door panel	26	265	19
Door check x Body	30	306	22
Door check x Door panel	5.5	56	49 in.·lbf
Back door lock x Door panel	5.5	56	49 in.·lbf
Door lock striker x Body	23	230	17
FRONT WIPER AND WASHER	–	–	–
Wiper motor x Wiper link	5.5	56	49 in.·lbf
Wiper link x Body	5.5	56	49 in.·lbf
Wiper arm x Wiper link	21	214	15
Outer front cowl top panel x Body	7.8	80	69 in.·lbf
REAR WIPER AND WASHER	–	–	–
Rear wiper arm x Door panel	5.5	56	49 in.·lbf
Rear wiper motor x Door panel	5.5	56	49 in.·lbf
TILT MOON ROOF	–	–	–
Tilt roof glass x Body	7.4	75	48 in.·lbf
Housing x Body	5.5	56	49 in.·lbf

SLIDING ROOF	–	–	–
Housing x Body	5.5	56	49 in.·lbf
INSTRUMENT PANEL	–	–	–
Steering wheel set nut	34	350	25
Front passenger airbag assembly x Reinforcement	20	205	15
Front passenger airbag assembly x Instrument panel upper	5.0	51	44 in.·lbf
ROOF HEADLINING	–	–	–
Center floor board x Body	8.0	82	71 in.·lbf
FRONT SEAT	–	–	–
Seat adjuster x Body	42	430	31
Seat adjuster x Seatback frame	42	430	31
Seat adjuster x Seat inner belt	42	430	31
REAR SEAT (Outer Side)	–	–	–
Seatback frame x Seat cushion frame	20	204	15
Seat cushion frame x Body	21	215	16
Seat cushion frame x Rear seat inner belt	42	430	31
Seat cushion frame x Support	37	375	27
REAR SEAT (Center)	–	–	–
Seat cushion frame x Seatback frame	20	204	15
SEAT BELT	–	–	–
Front seat outer belt shoulder Anchor x Body	42	430	31
Front seat outer belt floor anchor x Body	42	430	31
Front seat outer belt retractor x Body Upper:	8.0	82	71 in.·lbf
Front seat outer belt retractor x Body Lower:	42	430	31
Rear seat outer belt shoulder anchor x Body	42	430	31
Rear seat outer belt floor anchor x Body	42	430	31
Rear seat outer belt retractor x Body	42	430	31
Rear seat inner belt RH x Center seat	42	430	31
Rear seat inner belt LH x Center seat	42	430	31
Front seat inner belt x Front seat	42	430	31
FUEL TANK AND LINE	–	–	–
Fuel tank filler pipe support x Body	31	318	23
Fuel tank x Body	20	199	14
Fuel tank vent tube set plate x Fuel tank	3.5	36	30 in.·lbf

AIR CONDITIONING

SERVICE DATA

SS072-04

Refrigerant charge volume	430 ± 30 g (15.17 ± 1.06 oz.)
Drive belt tension	–
New belt	490 – 690 N (50 – 70 kgf)
Used belt	340 – 440 N (35 – 45 kgf)
Idle–up speed (M/T)	–
Magnetic clutch not engaged	600 ± 50 rpm
Magnetic clutch engaged (Condenser fan speed at low)	700 ± 50 rpm
Magnetic clutch engaged (Condenser fan speed at high)	875 ± 50 rpm
Idle–up speed (A/T)	–
Magnetic clutch not engaged	700 ± 50 rpm
Magnetic clutch engaged (Condenser fan speed at low)	700 ± 50 rpm
Magnetic clutch engaged (Condenser fan speed at high)	875 ± 50 rpm
Magnetic clutch clearance	0.5 ± 0.15 mm (0.020 ± 0.0059 in.)

SS073-03

TORQUE SPECIFICATION

Part tightened	N·m	kgf·cm	ft·lbf
Compressor x Engine	25	250	18
Compressor x Discharge hose	10	100	7
Compressor x Suction hose	10	100	7
A/C unit x Liquid and Suction hose (RHD only)	5.4	55	48 in.·lbf
Expansion valve x Evaporator	3.4	35	30 in.·lbf
Condenser x Liquid tube	5.4	55	48 in.·lbf
Condenser x Discharge hose	5.4	55	48 in.·lbf
Pressure switch x Liquied tube	10	100	7
Pressure plate x Compressor	13.2	135	9
Water temperature switch x Engine	34	350	25
Front passenger airbag x Reinforcement	20	205	15